If you are using a printed copy of this procedure, and not the on-screen version, then you <u>MUST</u> make sure the dates at the bottom of the printed copy and the on-screen version match.

The on-screen version of the Collider-Accelerator Department Procedure is the Official Version.

Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ

Training Office, Bldg. 911A.

C-A OPERATIONS PROCEDURES MANUAL

ATTACHMENT

4.120.12.d 12 O'clock (PEER 13) Sweep Tests

| C-A-OP | M Procedures in w | hich this Attachmen | t is used. |
|----------|-------------------|----------------------|-----------------|
| 4.120.12 | | | |
| | | | |
| | | | |
| | | | |
| | Hand Proce | essed Changes | |
| HPC No. | <u>Date</u> | Page Nos. | <u>Initials</u> |
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| | | Signature on F | |
| | Collide | er-Accelerator Depar | tment Chairman |

4.120.12.d 12 O'clock (PEER 13) Sweep Tests

PASS SEMI-ANNUAL ACCEPTANCE TEST PROTOCOL

| Division A Software Filename and Checksum: Title: | Checksum: |
|---|---------------|
| Division B Software Filename and Checksum: Title: | Checksum: |
| | |
| <u>Initial testing complete</u> : | |
| Test Team Leader's Name (Print): | Life Number: |
| Test Team Leader's Name (Sign): | Date:/ |
| Acceptance test procedure complete (following repairs and retesting | if required): |
| Test Team Leader's Name (Print): | Life Number: |
| Test Team Leader's Name (Sign): | Date:/ |
| Test results reviewed by: | |
| Safety Section Head's Name (Print): | Life Number: |
| Safety Section Head's Name (Sign): | / |
| <u>Test results accepted by Radiation Safety Committee</u> : | |
| RSC Member's Name (Print): | Life Number: |
| RSC Member's Name (Sign): | |

| 1.1 | | To Sweep | Zone 11Z1 | |
|-----|---|---|---|---|
| | | CLOSE | Gates 11GS1-I/O, 11EL1, and 11GI1 | |
| | П | VERIFY | Gates 11GS1-I/O, 11EL1, and 11GI1 are | CLOSED |
| | _ | RESET | Gate 11EL1 | |
| | | VERIFY | Gate 11EL1 | RESET |
| | | PLACE | Peer 13 in Mode 16 | |
| | | VERIFY | Peer 13 is in Controlled Access | MODE 16 |
| | | ACTIVATE | Check station 11CS1 | |
| | | VERIFY | Check station 11CS1 indicator (Area Secured) | BLINKS ONCE |
| | | ACTIVATE | Check station 11CS2 | DI DIVIZ ONGE |
| | | VERIFY | Check station 11CS2 indicator (Area Secured) | BLINKS ONCE |
| | | ACTIVATE VERIFY | Check station 11CS3 Check station 11CS3 indicator (Area Secured) | BLINKS ONCE |
| | | ACTIVATE | Check station 11CS4 | DLINKS ONCE |
| | П | VERIFY | Check station 11CS4 indicator (Area Secured) | ON |
| | | EXIT | Gate 11GI1 with Simultaneous Release | 011 |
| | | VERIFY | MCR sees Zone 11Z1 | SWEPT |
| | | Check for | test acceptance of Sweep of Zone 11Z1 | |
| | | | | |
| 1.2 | | To Sweep | Zone 12Z1 | |
| 1.2 | | To Sweep CLOSE | Zone 12Z1 Gates 11GI1-I&O , 11ED1 , 11MD2 , 12MD1 , 12GE1 , 12GI1-I&O | |
| 1.2 | | - | | CLOSED |
| 1.2 | | CLOSE | Gates 11GI1-I&O, 11ED1, 11MD2, 12MD1, 12GE1, 12GI1-I&O | CLOSED |
| 1.2 | | CLOSE VERIFY RESET | Gates 11GI1-I&O, 11ED1, 11MD2, 12MD1, 12GE1, 12GI1-I&O Gates 11GI1-I&O □, 11ED1 □, 11MD2 □, 12MD1 □, 12GE1 □, 12GI1-I&O □are Gate 11ED1, 11MD2, 12MD1 | |
| 1.2 | | CLOSE VERIFY RESET VERIFY | Gates 11GI1-I&O, 11ED1, 11MD2, 12MD1, 12GE1, 12GI1-I&O Gates 11GI1-I&O □, 11ED1 □, 11MD2 □, 12MD1 □, 12GE1 □, 12GI1-I&O □are Gate 11ED1, 11MD2, 12MD1 Gates 11ED1 □, 11MD2 □, 12MD1 □ is | CLOSED RESET |
| 1.2 | | CLOSE VERIFY RESET VERIFY PLACE | Gates 11GI1-I&O, 11ED1, 11MD2, 12MD1, 12GE1, 12GI1-I&O Gates 11GI1-I&O □, 11ED1 □, 11MD2 □, 12MD1 □, 12GE1 □, 12GI1-I&O □ are Gate 11ED1, 11MD2, 12MD1 Gates 11ED1 □, 11MD2 □, 12MD1 □ is Peer 13 in Mode 16 | RESET |
| 1.2 | _ | CLOSE VERIFY RESET VERIFY PLACE VERIFY | Gates 11GI1-I&O, 11ED1, 11MD2, 12MD1, 12GE1, 12GI1-I&O Gates 11GI1-I&O □, 11ED1 □, 11MD2 □, 12MD1 □, 12GE1 □, 12GI1-I&O □are Gate 11ED1, 11MD2, 12MD1 Gates 11ED1 □, 11MD2 □, 12MD1 □ is Peer 13 in Mode 16 Peer 13 is in Controlled Access | |
| 1.2 | | CLOSE VERIFY RESET VERIFY PLACE VERIFY ACTIVATE | Gates 11GI1-I&O, 11ED1, 11MD2, 12MD1, 12GE1, 12GI1-I&O Gates 11GI1-I&O □, 11ED1 □, 11MD2 □, 12MD1 □, 12GE1 □, 12GI1-I&O □are Gate 11ED1, 11MD2, 12MD1 Gates 11ED1 □, 11MD2 □, 12MD1 □ is Peer 13 in Mode 16 Peer 13 is in Controlled Access Check station 12XCS1 | RESET MODE 16 |
| 1.2 | | CLOSE VERIFY RESET VERIFY PLACE VERIFY ACTIVATE VERIFY | Gates 11GI1-I&O, 11ED1, 11MD2, 12MD1, 12GE1, 12GI1-I&O Gates 11GI1-I&O □, 11ED1 □, 11MD2 □, 12MD1 □, 12GE1 □, 12GI1-I&O □are Gate 11ED1, 11MD2, 12MD1 Gates 11ED1 □, 11MD2 □, 12MD1 □ is Peer 13 in Mode 16 Peer 13 is in Controlled Access Check station 12XCS1 Check station 12XCS1 indicator (Area Secured) | RESET |
| 1.2 | | CLOSE VERIFY RESET VERIFY PLACE VERIFY ACTIVATE VERIFY ACTIVATE | Gates 11GI1-I&O, 11ED1, 11MD2, 12MD1, 12GE1, 12GI1-I&O Gates 11GI1-I&O □, 11ED1 □, 11MD2 □, 12MD1 □, 12GE1 □, 12GI1-I&O □are Gate 11ED1, 11MD2, 12MD1 Gates 11ED1 □, 11MD2 □, 12MD1 □ is Peer 13 in Mode 16 Peer 13 is in Controlled Access Check station 12XCS1 Check station 12XCS1 indicator (Area Secured) Check station 12XCS2 | RESET MODE 16 BLINKS ONCE |
| 1.2 | | CLOSE VERIFY RESET VERIFY PLACE VERIFY ACTIVATE VERIFY ACTIVATE VERIFY | Gates 11GI1-I&O, 11ED1, 11MD2, 12MD1, 12GE1, 12GI1-I&O Gates 11GI1-I&O □, 11ED1 □, 11MD2 □, 12MD1 □, 12GE1 □, 12GI1-I&O □ are Gate 11ED1, 11MD2, 12MD1 Gates 11ED1 □, 11MD2 □, 12MD1 □ is Peer 13 in Mode 16 Peer 13 is in Controlled Access Check station 12XCS1 Check station 12XCS1 indicator (Area Secured) Check station 12XCS2 Check station 12XCS2 indicator (Area Secured) | RESET MODE 16 |
| 1.2 | | CLOSE VERIFY RESET VERIFY PLACE VERIFY ACTIVATE VERIFY ACTIVATE VERIFY ACTIVATE | Gates 11GI1-I&O, 11ED1, 11MD2, 12MD1, 12GE1, 12GI1-I&O Gates 11GI1-I&O □, 11ED1 □, 11MD2 □, 12MD1 □, 12GE1 □, 12GI1-I&O □ are Gate 11ED1, 11MD2, 12MD1 Gates 11ED1 □, 11MD2 □, 12MD1 □ is Peer 13 in Mode 16 Peer 13 is in Controlled Access Check station 12XCS1 Check station 12XCS1 indicator (Area Secured) Check station 12XCS2 Check station 12XCS2 indicator (Area Secured) Check station 12XCS3 | RESET MODE 16 BLINKS ONCE BLINKS ONCE |
| 1.2 | | CLOSE VERIFY RESET VERIFY PLACE VERIFY ACTIVATE VERIFY ACTIVATE VERIFY ACTIVATE VERIFY | Gates 11GI1-I&O, 11ED1, 11MD2, 12MD1, 12GE1, 12GI1-I&O Gates 11GI1-I&O □, 11ED1 □, 11MD2 □, 12MD1 □, 12GE1 □, 12GI1-I&O □ are Gate 11ED1, 11MD2, 12MD1 Gates 11ED1 □, 11MD2 □, 12MD1 □ is Peer 13 in Mode 16 Peer 13 is in Controlled Access Check station 12XCS1 Check station 12XCS1 indicator (Area Secured) Check station 12XCS2 Check station 12XCS2 indicator (Area Secured) | RESET MODE 16 BLINKS ONCE |
| 1.2 | | CLOSE VERIFY RESET VERIFY PLACE VERIFY ACTIVATE VERIFY ACTIVATE VERIFY ACTIVATE | Gates 11GI1-I&O, 11ED1, 11MD2, 12MD1, 12GE1, 12GI1-I&O Gates 11GI1-I&O □, 11ED1 □, 11MD2 □, 12MD1 □, 12GE1 □, 12GI1-I&O □are Gate 11ED1, 11MD2, 12MD1 Gates 11ED1 □, 11MD2 □, 12MD1 □ is Peer 13 in Mode 16 Peer 13 is in Controlled Access Check station 12XCS1 Check station 12XCS1 indicator (Area Secured) Check station 12XCS2 Check station 12XCS2 indicator (Area Secured) Check station 12XCS3 Check station 12XCS3 indicator (Area Secured) | RESET MODE 16 BLINKS ONCE BLINKS ONCE |
| 1.2 | | CLOSE VERIFY RESET VERIFY PLACE VERIFY ACTIVATE VERIFY ACTIVATE VERIFY ACTIVATE VERIFY ACTIVATE VERIFY | Gates 11GI1-I&O, 11ED1, 11MD2, 12MD1, 12GE1, 12GI1-I&O Gates 11GI1-I&O □, 11ED1 □, 11MD2 □, 12MD1 □, 12GE1 □, 12GI1-I&O □are Gate 11ED1, 11MD2, 12MD1 Gates 11ED1 □, 11MD2 □, 12MD1 □ is Peer 13 in Mode 16 Peer 13 is in Controlled Access Check station 12XCS1 Check station 12XCS1 indicator (Area Secured) Check station 12XCS2 Check station 12XCS2 indicator (Area Secured) Check station 12XCS3 Check station 12XCS3 Check station 12XCS4 Check station 12XCS4 indicator (Area Secured) | RESET MODE 16 BLINKS ONCE BLINKS ONCE BLINKS ONCE |
| 1.2 | | CLOSE VERIFY RESET VERIFY PLACE VERIFY ACTIVATE VERIFY ACTIVATE VERIFY ACTIVATE VERIFY | Gates 11GI1-I&O, 11ED1, 11MD2, 12MD1, 12GE1, 12GI1-I&O Gates 11GI1-I&O □, 11ED1 □, 11MD2 □, 12MD1 □, 12GE1 □, 12GI1-I&O □ are Gate 11ED1, 11MD2, 12MD1 Gates 11ED1 □, 11MD2 □, 12MD1 □ is Peer 13 in Mode 16 Peer 13 is in Controlled Access Check station 12XCS1 Check station 12XCS1 indicator (Area Secured) Check station 12XCS2 Check station 12XCS2 Check station 12XCS3 Check station 12XCS3 Check station 12XCS3 indicator (Area Secured) Check station 12XCS4 Check station 12XCS4 Check station 12XCS4 indicator (Area Secured) | RESET MODE 16 BLINKS ONCE BLINKS ONCE BLINKS ONCE |

3

| 1.3 | To Sweep | Zone 12Z2 | |
|-----|---------------------------|--|----------------------|
| [| CLOSE VERIFY | Gates 12GI1-I&O, 12EL1, 12ED1, 1GSI-I&O Gates 12GI1-I&O, 12EL1, 12ED1, 1GSI-I&O are | CLOSED |
| [| RESET VERIFY | Gate 12EL1 , 12ED1 Gate 12EL1 , 12ED1 are | RESET |
| _ | PLACE VERIFY VERIFY | Peer 13 in Mode 16 Peer 13 is in Controlled Access MCR sees Zone 12Z1 | MODE 16 NOT SWEPT |
| L | ACTIVATE | Check station 12CS5 | |
| [| VERIFY ACTIVATE | Check station 12CS5 indicator (Area Secured) Check station 12CS4 | BLINKS ONCE |
| [| VERIFY ACTIVATE | Check station 12CS4 indicator (Area Secured) Check station 12CS2 | BLINKS ONCE |
| [| VERIFY ACTIVATE | Check station 12CS2 indicator (Area Secured) Check station 12CS3 | BLINKS ONCE |
| [| VERIFY | Check station 12CS3 indicator (Area Secured) | BLINKS ONCE |
| [| ACTIVATE VERIFY | Check station 12CS1 Check station 12CS1 indicator (Area Secured) | ON |
| [| EXIT VERIFY | Gate 12GE1 with Simultaneous Release MCR sees Zone 12Z2 | SWEPT |
| | Check for t | est acceptance of Sweep of Zone 12Z2 | |
| | PLACE VERIFY | 6 and loss of sweep with illegal opening of gate 11GS1-I. Peers 15 & 13 in Controlled Access Peer 15 is in Peore 13 is in | MODE 16 |
| - | VERIFY VERIFY | Peer 13 is in The warning lights and LED message: Stop Call MCR for Access X-7400 Stop on both sides of the gate are | MODE 16 ON |
| [| VERIFY | The warning light on both sides of gate 11GS1-O indicate: Call MCR for Crossover Amber | ON |
| [| SWEEP VERIFY | Zone 10Z2 MCR sees Zone 10Z2 | SWEPT |
| [| SWEEP VERIFY | Zone 11Z1 MCR sees Zone 11Z1 | SWEPT |
| [| VERIFY | 11GS1 gatebox lights are as follows: Area Secured (S11) Amber Area Secured (S10) Amber | ON ON |
| [| OPEN VERIFY | Gate 11GS1-I with Simultaneous Release MCR sees Zone 11Z1 | SWEPT |
| - | VERIFY | MCR sees Zone 10Z2 MCR sees Peer 15 is in | SWEPT MODE 16 |
| = | VERIFY VERIFY | MCR sees Peer 13 is in | MODE 16 MODE 16 |
| [| VERIFY | 11GS1 gatebox lights are as follows: Area Secured (S11) Amber | ON |
| | CLOSE | Area Secured (S10) Amber Gate 11GS1-I | ON |
| [| OPEN VERIFY | Gate 11GS1-I with without Simultaneous Release MCR sees Zone 11Z1 | NOT SWEPT |
| [| VERIFY | MCR sees Zone 10Z2 | NOT SWEPT |
| [| VERIFY | MCR sees Peer 13 is in | MODE 16 |

| | VERIFY | MCR sees Peer 13 is in | MODE 16 |
|--------|----------|--|--------------------|
| | VERIFY | 11GS1 gatebox lights are as follows: | |
| | | Area Secured (S11) Amber | OFF |
| | | Area Secured (S10) Amber | OFF |
| | CLOSE | Gate 11GS1-I | |
| | | or test acceptance of retention of sweep with legal opening of gate 1 ode 16 and Peer 13 in CA, Mode 16 and loss of sweep with illegal o | |
| 1.5 To | | on of sweep with legal opening of gate 11GS1-I with Peer 15 in CA, lode 16 and loss of sweep with illegal opening of gate 11GS1-I | Mode 17 and Peer |
| | PLACE | Peer 15 in Controlled Access, Mode 17 | |
| | VERIFY | Peer 15 is in | MODE 17 |
| | VERIFY | Peer 13 is in | MODE 16 |
| | VERIFY | The warning lights and LED message: Stop Call MCR for Access | 1 |
| | | X-7400 Stop on both sides of the gate are | ON |
| | VERIFY | The warning light on both sides of gate 11GS1-O indicate: Call M | |
| | | for Crossover Amber | ON |
| | SWEEP | Zone 10Z2 | |
| | VERIFY | MCR sees Zone 10Z2 | SWEPT |
| | SWEEP | Zone 11Z1 | a |
| | VERIFY | MCR sees Zone 11Z1 | SWEPT |
| | VERIFY | 11GS1 gatebox lights are as follows: | 0.57 |
| | | Area Secured (S11) Amber | ON |
| | OPEN | Area Secured (S10) Amber Gate 11GS1-I with Simultaneous Release | ON |
| | VERIFY | MCR sees Zone 11Z1 | SWEPT |
| | VERIFY | MCR sees Zone 10Z2 | SWEPT |
| | VERIFY | MCR sees Peer 15 is in | MODE 17 |
| _ | VERIFY | MCR sees Peer 13 is in | MODE 16 |
| | VERIFY | | MODE 10 |
| | VEKIT I | 11GS1 gatebox lights are as follows: Area Secured (S11) Amber | ON |
| | | Area Secured (S11) Amber Area Secured (S10) Amber | ON ON |
| | CLOSE | Gate 11GS1-I | OIV |
| | OPEN | Gate 11GS1-I with without Simultaneous Release | |
| | VERIFY | MCR sees Zone 11Z1 | NOT SWEPT |
| | VERIFY | MCR sees Zone 10Z2 | NOT SWEPT |
| | VERIFY | MCR sees Peer 15 is in | MODE 17 |
| | VERIFY | MCR sees Peer 13 is in | MODE 16 |
| | VERIFY | 11GS1 gatebox lights are as follows: | MODETO |
| Ц | VERII I | Area Secured (S11) Amber | OFF |
| | | Area Secured (S10) Amber | OFF |
| | CLOSE | Gate 11GS1-I | |
| | | | |
| | Check fo | or test acceptance of retention of sweep with legal opening of gate 1 | 1GS1-I with Peer 1 |
| | | ode 17 and Peer 13 in CA, Mode 16 and loss of sweep with illegal o | pening of gate |
| | 11GS1-I. | | |

1.6 Test of retention of sweep with legal opening of gate 11GS1-I with Peer 15 in CA, Mode 17 and Peer13 in CA Mode 17 and loss of sweep with illegal opening of gate 11GS1-I.

| | PLACE VERIFY VERIFY VERIFY | Peers 15 & 13 in Controlled Ac Peer 13 is in Peer 15 is in | cess, Mode 17 ssage: Stop Call MCR for Access | MODE 17 MODE 17 |
|---|-------------------------------------|--|---|--------------------|
| Ш | VERIT 1 | X-7400 Stop on both sides of the | ON | |
| | VERIFY | The warning light on both sides of gate 11GS1-O indicate: Call MCR for Crossover Amber | | ON |
| | SWEEP | Zone 10Z2 | | ~ |
| | VERIFY | MCR sees Zone 10Z2 | | SWEPT |
| | SWEEP VERIFY | Zone 11Z1 MCR sees Zone 11Z1 | | SWEPT |
| | VERIFY | 11GS1 gatebox lights are as follo | ows: | SWEIT |
| | , | Area Secured (S11) Amb | | ON |
| | | Area Secured (S10) Amb | per | ON |
| | OPEN | Gate 11GS1-I with Simultaneou | ıs Release | |
| | VERIFY | MCR sees Zone 11Z1 | | SWEPT |
| | VERIFY | MCR sees Zone 10Z2 | | SWEPT |
| | VERIFY | MCR sees Peer 13 is in | | MODE 17 |
| | VERIFY | MCR sees Peer 15 is in | | MODE 17 |
| | VERIFY | 11GS1 gatebox lights are as follo | ows: | |
| | | Area Secured (S11) Amb | per | ON |
| | | Area Secured (S10) Amb | per | ON |
| | CLOSE | Gate 11GS1-I | | |
| | OPEN | Gate 11GS1-I with without Sim | ultaneous Release | |
| | VERIFY | MCR sees Zone 11Z1 | | NOT SWEPT |
| | VERIFY | MCR sees Zone 10Z2 | | NOT SWEPT |
| | VERIFY | MCR sees Peer 13 is in | | MODE 17 |
| | VERIFY | MCR sees Peer 15 is in | | MODE 17 |
| | VERIFY | 11GS1 gatebox lights are as follo | ows: | |
| | | Area Secured (S11) Amb | per | OFF |
| | | Area Secured (S10) Amb | per | OFF |
| | CLOSE | Gate 11GS1-I | | |
| | | | | |

Check for test acceptance of retention of sweep with legal opening of gate 11GS1-I with Peer 15 in CA, Mode 17 and Peer 13 in CA, Mode 17 and loss of sweep with illegal opening of gate 11GS1-I.

END OF TEST PROCEDURE

| TTL: Sign for completion of initial testing: | | |
|--|-----------|--|
| | Date:// | |
| TTL: Sign for completion of final testing: | | |
| | Date: / / | |